

Loudon County Planning & Codes

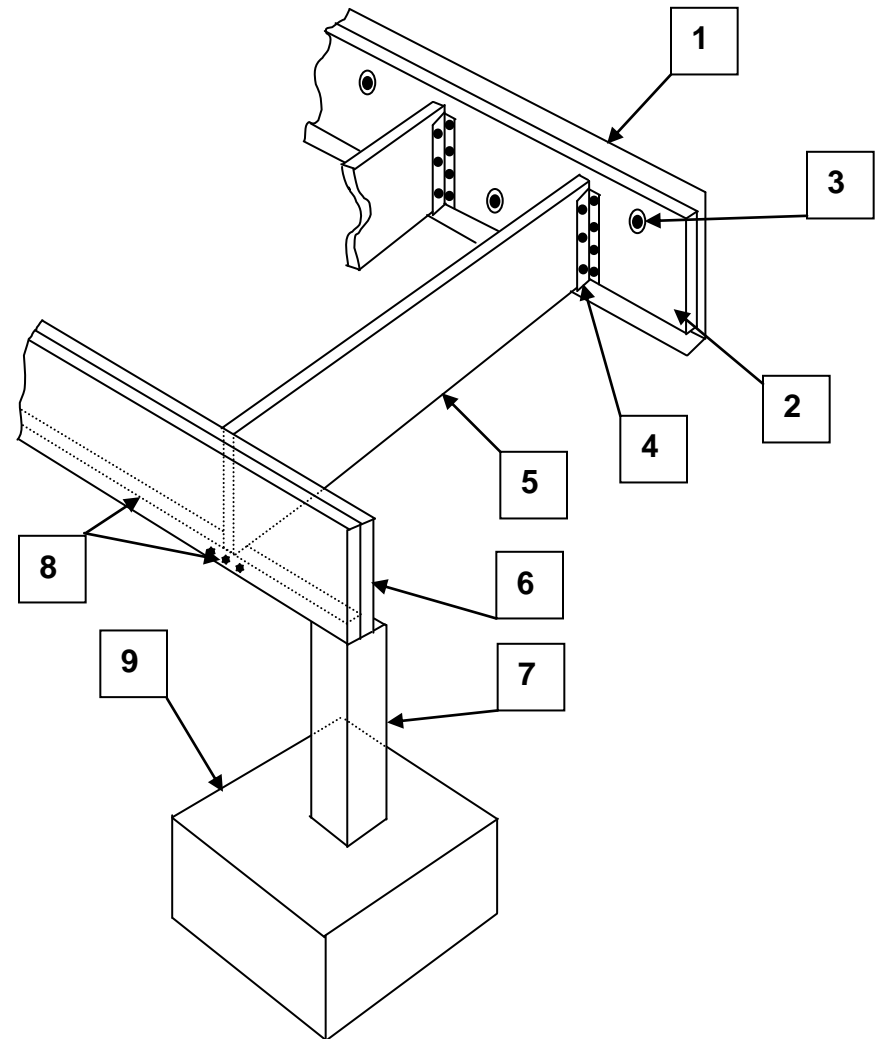
Residential Deck Handout



This handout is a guide and is not all-inclusive and all materials must be installed per the manufacturers' instructions and the 2006 International Residential Code IRC.

1. Flashing shall be installed in such a manner to prevent the entry of water into the wall cavity or penetration of water to the building structural framing components. Flashing shall be corrosion-resistance and installed per manufacturers instructions. This is usually stainless, double hot dipped galvanized, vinyl or copper.
2. The house wall ledger board shall be bolted to the house and be the same size as the floor joists (or larger if installing ledger strips).
3. The house ledger board shall be bolted (staggered top to bottom) to the house with minimum $\frac{1}{2}$ " dia. lag bolts * with washers that are long enough to fully penetrate the structural member of the house. Bolt spacing shall be 24" o.c. maximum.
4. Joist hangers shall be sized and anchored * in accordance to the joist size and manufacturer's instructions.
5. Joists shall be sized per the table below or in accordance with the 2006 IRC.
6. Deck girders shall be sized per the table below or in accordance with the 2006 IRC.
7. Girders must be fully supported by and structurally anchored to columns.
8. Wood columns shall not be less than 4"x4" and steel columns shall not be less than 3" in diameter or an approved equivalent. Columns shall be restrained at the bottom to prevent lateral displacement.
9. Ledger strips can be used in lieu of joist hangers or wall bearing. Ledger strips are to be 2" x 2" minimum and anchored with 3 - #16 nails * spaced 2" - 3" apart under each joist location.
9. Columns must be supported by footings. The bottom of the footings must be a minimum of 12" below final grade and sized to support all imposed loads.

*** ALL FASTENERS, HANGERS, AND NAILS ARE TO BE HOT DIPPED GALVANIZED, STAINLESS STEEL, OR AS PER SECTION R402.1.1 OF THE 2006 IRC.**



Allowable Span for Girder Supporting One Floor Only
40psf Live Load, 10psf Dead Load, 1.00 Load Duration Factor

Span of Supported Floor Framing

Size of Wood Girder	4'	6'	8'	10'	16'
4"x 4"	5'-0"	4'-0"	3'-6"	3'-0"	2'-6"
4"x 6"	7'-6"	6'-0"	5'-6"	4'-6"	4'-0"
4"x 8" or 6"x 6"	10'-0"	8'-6"	7'-6"	6'-6"	5'-0"
4"x 10" or 6"x 8"	13'-0"	10'-6"	9'-6"	8'-6"	5'-6"
4"x 12" or 6"x 10"	16'-0"	12'-6"	11'-0"	10'-0"	8'-0"
Beams that are the same size as the joist used may be single ply if supported every 4'					

Spans are based on No. 2 lumber.

Span of supported floor is found by adding the unsupported floor framing on each side of the girder and dividing by 2.

Joist Span Chart (Based on No. 2 Pine)

Spacing of Joist O.C.				
Joist Size	12"	16"	19.2"	24"
2"x 6"	10'-9"	9'-9"	9'-2"	8'-6"
2"x 8"	14'-2"	12'-10"	12'-1"	11'-0"
2"x 10"	18'-0"	16'-1"	14'-8"	13'-1"
2"x 12"	21'-9"	18'-10"	17'-2"	15'-5"